WHAT IS CLAIMED IS:

1. A printing apparatus which performs printing by scanning a carriage unit, having a printhead and a voltage control unit controlling the printhead, over a print medium based on information transmitted by an external apparatus, said voltage control unit comprising:

reception means for receiving an information signal transmitted from the printhead; and

voltage generation means for generating a driving voltage which is adjusted to drive the printhead based on the information signal received by said reception means.

2. The printing apparatus according to claim 1, wherein said voltage generation means is a DC/DC converter which transforms a DC voltage to be applied to the printhead into a value appropriate for driving a mounted head.

3. The printing apparatus according to claim 1, wherein the information signal includes an identification signal for identifying a type of the printhead, and said voltage generation means controls the driving voltage in accordance with the

identification signal.

4. The printing apparatus according to claim 1, wherein the information signal includes a signal indicative of a variation of a plurality of heater resistances provided in the printhead, and said voltage generation means controls the driving voltage in accordance with said signal.

5. The printing apparatus according to claim 1, wherein the information signal includes a signal indicative of temperature data of the printhead, and said voltage generation means controls the driving voltage in accordance with said signal.

6. The printing apparatus according to claim 1, wherein a detection resistance is provided inside the printhead for detecting a variation of the heater resistances, and said voltage generation means comprises an internal resistance connected in series with the detection resistance,

wherein said voltage generation means compares a reference voltage, divided by the internal resistance and the detection resistance, with a driving voltage which drives the printhead, then controls the driving voltage so as to cancel an error in these voltages, and

adjusts the driving voltage in accordance with a variation of a load resistance value of the printhead so as to correct the variation.

7. The printing apparatus according to claim 1, wherein the printhead includes a diode for detecting a temperature, and said voltage generation means comprises an internal resistance connected in series with the diode,

wherein said voltage generation means compares a reference voltage, divided by the internal resistance, detection resistance provided inside the printhead, and diode, with a driving voltage which drives the printhead, then corrects an error in these voltages, and generates a control voltage for optimizing power supplied to heat the printhead, so as to discharge ink in accordance with a temperature variation of the printhead.

8. The printing apparatus according to claim 1, further comprising:

a plurality of heat sources for generating bubble generation heat for driving in nozzle unit;

driving pulse generation means for generating a pulse train which drives the plurality of heat sources; and

heat source number detection means for detecting a number of plurality of heat sources driven simultaneously,

wherein said voltage generation means adjusts a voltage outputted to the heat sources based on a signal from said heat source number detection means.

9. The printing apparatus according to claim 1, wherein said heat source number detection means detects the number of plurality of heat sources driven simultaneously based on an image data signal.

10. A printing apparatus which performs printing by scanning a carriage unit, capable of holding a printhead having a plurality of nozzles discharging ink, over a print medium based on information transmitted from an external apparatus, a body of the carriage unit comprising:

heat source detection means for detecting a number of heat sources driving the nozzles; and

voltage generation means for supplying a voltage to a heat source for driving the nozzles, in accordance with the number of heat sources detected by said heat source detection means.

11. A printing apparatus forming an image on a print

medium by supplying an electric energy necessary for printing to a heating resistance of a printhead, comprising:

a switching device for controlling each heating resistance;

a printhead including a detection resistance for detecting a variation of a resistance value of the heating resistances;

a voltage variable circuit for adjusting a power source voltage, applied to the heating resistance, in accordance with the resistance value of the detection resistance so as to apply energy appropriate for printing; and

a head driving power source circuit for comparing a first voltage value, generated by dividing a reference voltage by the detection resistance and a resistance provided outside the printhead, with a second voltage value, generated by dividing an output voltage of the head driving power source driving the printhead by a resistance, and controlling an output voltage so as to cancel a difference between the first voltage value and the second voltage value,

wherein a GND-side end of the detection resistance provided inside the printhead is connected as a common wiring with a GND wiring transmitting a driving current of the printhead.

12. The printing apparatus according to claim 11, wherein the GND-side end of the detection resistance connects with the common wiring transmitting a load current in an internal portion of the printhead, and the detection resistance does not have a dedicated outgoing contact pad on a GND-side terminal.

13. The printing apparatus according to claim 11, wherein in a case where the GND-side end of the detection resistance connects with the common wiring transmitting a load current in an external portion of the printhead, the connection position is located in the middle of the printhead and an output voltage stable point of the power source circuit.

14. The printing apparatus according to claim 11, wherein a ratio of a wiring resistance value of the common wiring to a wiring resistance value of all wirings, connecting the power source circuit with the printhead and transmitting a head load current, is appropriately set in accordance with an output voltage so as to cancel a voltage drop in a load due to a wiring resistance.